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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,859	02/22/2002	Marc Tremblay	004-7041	9760

22120 7590 07/28/2004

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EXAMINER

BRAGDON, REGINALD GLENWOOD

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/080,859	Applicant(s) TREMBLAY ET AL.	
	Examiner Reginald G. Bragdon	Art Unit 2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 16, 17, 19, 21-25, 27-32, 34 and 36 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 16, 17, 19, 22-25, 27-30 and 34 is/are allowed.
- 6) ☒ Claim(s) 36 is/are rejected.
- 7) ☒ Claim(s) 21, 31 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement(s) received 01 August 2003 has been considered.
Please see the attached PTO-1449(s).

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

There are non-initialed alterations for inventor Shailender Chaudhry's post office address.

Drawings

3. The drawings are objected to because in figure 2, there is no element "201D" (there are two "201C). See page 6, paragraph 1022, line 3.
4. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement

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sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: there is no antecedent basis for the subject matter of claim 36 in the specification.

Claim Objections

6. Claims 21 and 31-32 are objected to because of the following informalities:

As per claim 21, line 2, "the heap" should be --a heap--.

As per claim 31, line 1, "26" should be --25--.

As per claim 32, line 1, "26" should be --25--.

Appropriate correction is required.

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Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 36 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant does not describe a method of making a processor wherein during fabrication defining at least one writable store and likely pointer value detection logic.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 36 is rejected under 35 U.S.C. 102(b) as being anticipated by Glew et al. (5,680,565).

As per claim 36, Glew et al. teaches a microprocessor (inherently a fabricated, integrated circuit). See figure 2. The page miss handler (PMH) includes memory-type range registers (MTRR; “at least one writable store”) which, by definition, identify (“delimit”) a memory attribute for a region (“subset of addressable memory”). See column 16, lines 39-42, and step

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312 of figure 7. The MTRRs are consulted during a DTLB miss in the page miss handler logic (“likely pointer value detection logic”), where the “pointer” is the physical address, and where the linear address is stored in pipeline registers, and the PMH is responsive to the linear address in performing the page table walk. See column 16, lines 30-34.

Allowable Subject Matter

11. Claims 1-11, 16-17, 19, 21-25, 27-32, 34, and 36-42 are allowable over the prior art.

Claims 21 and 31-32 are objected to as set forth above.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Christie (6,247,107) teaches determining whether or not a memory operation is prefetchable by determining whether or not the address is within a range of addresses identified as prefetchable by the prefetch control unit 48. However, the prefetch control logic is not part of the processor (as required by claims 1, 11, 25, and 34) and it is not taught that the memory range is memory that is dynamically allocated (claims 1, 11, 25, and 34) by or in the course of instruction sequence (as required by claim 16).

Meier (6,076,151) teaches prefetching in dynamically allocated data structures, but does not teach or suggest, alone or in combination, the limitations of the independent claims.

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Hagersten (5,848,254) teaches prefetching if an address of a write stream operation falls within a predetermined address range. However, the prefetch operation is performed by system interface 24, not the processors 16x.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

All "OFFICIAL" patent application related correspondence transmitted by FAX must be directed to the central FAX number at (703) 872-9306:

"INFORMAL" or "DRAFT" FAX communications may be sent to the Examiner at (703) 746-5693, only after approval by the Examiner.

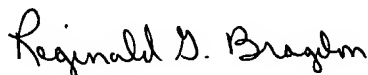
Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA., Fourth Floor (receptionist).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reginald G. Bragdon whose telephone number is (703) 305-3823. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and every other Friday from 7:00 AM to 3:30 PM.

The examiner's supervisor, Mano Padmanabhan, can be reached at (703) 306-2903.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

RGB
July 22, 2004


Reginald G. Bragdon
Primary Patent Examiner
Art Unit 2188

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